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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/717,284	11/22/2000	Hun Gun Park	YHK-057	2061
34610	7590	02/17/2004	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			KEANEY, ELIZABETH MARIE	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/717,284

Applicant(s)

PARK, HUN GUN

Examiner

Elizabeth Gemmell

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5 and 10-14 is/are allowed.
- 6) ☒ Claim(s) 6-9 and 15-24 is/are rejected.
- 7) ☒ Claim(s) 8 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5/30/03 6) ☐ Other: _____

DETAILED ACTION

Receipt is acknowledged of the Amendments and Remarks filed 22 October 2003.

Response to Arguments

Applicant's arguments, see page 9, lines 7-8, filed 22 October 2003, with respect to the rejection(s) of claim(s) 9, 20 and 21 under U.S.C. 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Lepselter (US Patent 5,777,436).

Applicant's arguments, see page 10, lines 4-10, filed 22 October 2003, with respect to the rejection(s) of claim(s) 6 and 15 under U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Lu et al. (US Patent 6,580,216; hereinafter Lu), Ohsawa et al. (US Patent 5,939,826; hereinafter Ohsawa) and Park et al. (US Patent 6,650,051; hereinafter Park).

Claim Objections

Claims 8 and 17 are objected to because of the following informalities:

- It is unclear to the examiner how black matrices are formed longitudinally (parallel) in a direction crossing (oblique to) the barrier ribs. It seems that

this is contradictory. The claim could be interpreted several ways including:

- the black matrices are formed only longitudinally to the barrier ribs;
- the black matrices are formed only obliquely to the barrier ribs; or
- the black matrices are formed both longitudinally and obliquely to the barrier ribs.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 6 is rejected under 35 U.S.C. 102(e) as being anticipated by Lu.

Re claim 6: Lu discloses, in figures 1,3 and 4 and throughout the disclosure, a plasma display panel, comprising:

- a sustaining electrode pair (12) of a transparent conductive material (column 2, line 9) provided on an upper substrate (10);
- a plurality of barrier ribs (5) formed on a lower substrate (1) in a direction crossing the sustaining electrode pair;
- a display region coexisting with a non-display region (column 1, line 25-27), wherein the non-display region is provided with black matrices for shutting out light (36).

Note: The examiner has defined the display region to include only area in which discharge occurs and the non-display region being that in which no discharge occurs.

Claims 15,16,17 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohsawa.

Re claim 15: Ohsawa discloses, in figure 2 and throughout the disclosure, a plasma display panel comprising:

- display area (S);
- a non-display area (2);

- black matrices (5) provided on one of an upper substrate (6) in the non-display area and configured for non-transmission of light (column 5, line 6).

Note: The examiner has defined the display region to include only area in which discharge occurs and the non-display region being that in which no discharge occurs.

Re claim 16: Oshawa discloses, in figure 2 and throughout the disclosure, a plurality of barrier ribs (2) formed on the lower substrate (1), wherein the black matrices (5) are arranged in parallel to the plurality of barrier ribs (2).

Re claim 17: As best understood by the examiner, Oshawa discloses, in figure 2 and throughout the disclosure, the black matrices (5) being formed in at each longitudinal end of the plurality of barrier ribs (2).

Re claim 24: Ohsawa discloses, in figure 2 and throughout the disclosure, the black matrices (2) being provided on the upper surface (6) only in the non-display area.

Claims 9,20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Lepselter.

Re claim 9: Lepselter discloses, in figure 9 and throughout the disclosure, a plasma display panel, comprising:

- an upper substrate (50);
- a protective layer provided at a rear side of the upper substrate (62);
- a display region (60) coexisting with a non-display region (66), wherein the protective layer is provided only on the display region.

Note: The examiner has defined the display region to include only area in which discharge occurs and the non-display region being that in which no discharge occurs.

Re claim 20: Lepselter discloses, in figure 9 and throughout the disclosure, a plasma display panel, comprising:

- a display area (60);
- a non-display area (66); and
- a protective layer (62) is provided on an upper substrate only in the display region.

Note: The examiner has defined the display region to include only area in which discharge occurs and the non-display region being that in which no discharge occurs.

Re claim 21: Lepselter discloses, in figure 9 and throughout the disclosure, the protective layer (62) formed at a rear side of the upper substrate (50).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6,7,8,18,19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsawa in view of Park.

Re claims 6,18, and 19: Ohsawa discloses, in figure 2 and throughout the disclosure, a plasma display panel, comprising:

- a sustaining line electrode (21) provided on an upper substrate (6);
- a plurality of barrier ribs (2) formed on a lower substrate (1) in a direction crossing the sustaining electrode pair;
- a display region coexisting with a non-display region, wherein the non-display region is provided with black matrices for shutting out light (5).

Note: The examiner has defined the display region to include only area in which discharge occurs and the non-display region being that in which no discharge occurs.

However, Ohsawa fails to teach or fairly suggest a pair of sustaining electrodes of a transparent conductive material.

Park discloses, in figure 5 and throughout the disclosure, a sustaining electrode pair (22b,22c) of a transparent conductive material (column 3, line 49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute a sustaining electrode pair of a transparent conductive material for a sustaining line electrode because the electrode pair produces a more luminous and reliable emission, thereby improving the brightness of the display.

Re claim 7: Ohsawa discloses, in figure 2 and throughout the disclosure, the black matrices (5) being arranged in parallel to the plurality of barrier ribs (2).

Re claim 8: As best understood by the examiner, Oshawa discloses, in figure 2 and throughout the disclosure, the black matrices (5) being formed in at each longitudinal end of the plurality of barrier ribs (2).

Re claim 23: Ohsawa discloses, in figure 2 and throughout the disclosure, the black matrices (2) being provided on the upper surface (6) only in the non-display area.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lepselter in view of Ohsawa.

Lepselter shows all the limitations as shown above.

However, Lepselter fails to teach or fairly suggest the use of black matrices on either the upper or lower substrate.

Ohsawa discloses, in figure 2 and throughout the disclosure, black matrices (5) on the upper substrate (6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to introduce black matrices into the display panel disclosed by Lepselter because the use of black matrices improves the overall contrast of the image produced by the display panel.

Allowable Subject Matter

Claims 3-4 and 10-14 are allowable over the prior art.

The following is a statement of reasons for the indication of allowable subject matter: As set forth in Office Action dated 22 May 2003.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patents 6,097,151, 6,597,113 and 6,380,678 disclose a protective layer only in the display region.

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- US Patent 6,621,231 discloses a plurality of barrier ribs having a first and second width wherein the first width is different from the second, however it was filled after the instant application.
- US Patent 4,575,751 discloses the use of black matrices around the perimeter of the display device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Gemmell whose telephone number is (703) 305-1937. The examiner can normally be reached on Monday-Thursday 6:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (703) 308-4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


emg


DAVID V. BRUCE
PRIMARY EXAMINER